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MEDICAL AND SURGICAL REPORT

OF THE CASE OF THE

LATE PRESIDENT OF THE UNITED STATES.

SPECIAL APPENDIX.

EXTRACTED FROM THE REPORT OF THE SURGEON-GENERAL, U. S. NAVY.

1901.

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MEDICAL AND SURGICAL REPORT OF THE CASE OF THE LATE PRESIDENT OF THE UNITED STATES.

By PRESLEY M. RIXEY, *Medical Inspector, United States Navy.*

William McKinley, President of the United States. Born January 29, 1843. Native of Ohio. Gunshot wound of abdomen. Wound received at 4.07 p. m., September 6, 1901, in the Academy of Music, Pan-American Exposition, Buffalo, N. Y. In the line of duty, while receiving the people, was shot by Leon F. Czolgosz.

FIRST DAY—SEPTEMBER 6, FROM 4.07 P. M. TO MIDNIGHT.

Report made to Dr. Roswell Park, medical director, Pan-American Exposition, fixes the time of shooting at 4.07 p. m., and the President's arrival at the emergency hospital 4.18 p. m. Immediately upon being undressed an examination revealed upon the surface of the body two wounds, the one to the right of the sternal line being an abrasion 1 cm. in diameter. Measuring from the suprasternal notch the distance was 5½ cm., from the right nipple 10 cm., and from the line of the right nipple 8¼ cm. The second wound was a penetrating wound of the abdomen 15½ cm. from the left nipple and 16½ cm. from the umbilicus, being 1 cm. from the right of a line drawn from the umbilicus to the nipple, and made by a .32-caliber bullet.

All those present agreed that an immediate laparotomy was demanded, and preparations were made accordingly. Dr. Eugene Wasdin, of the Marine-Hospital Service, administered the anesthetic. The administration of the ether was begun at 5.20 p. m., and the President was under its influence at 5.29 p. m. Dr. M. D. Mann was the operator, Dr. Herman Mynter first assistant, Drs. Parmenter and Lee sponging, Dr. E. C. Mann at sutures, and Drs. Hall and Rixey assisting with the lights. Miss Walters was in charge of the nurses—Miss Morris, Miss Barnes, Miss Baron, Miss Shannon, Miss Dorchester, and Miss Simmons.

5.30 p. m.—Dr. Mann made a vertical incision 8 cm. in length, passing through the bullet wound, and in a few minutes enlarged it to 10 cm. A piece of cloth, carried in by the bullet, was found and removed.

5.38 p. m.—0.002 grams strychnine administered hypodermically.

5.41 p. m.—The stomach was exposed and a perforating bullet wound found in the anterior wall midway between the orifices of the stomach about 1 cm. in diameter and about 1½ cm. from the line of the omental attachment. The wound was examined and enlarged so as to admit the finger.

5.43 p. m.—The wound of the stomach was secured with a double row of silk sutures.

5.55 p. m.—Respiration, 33; pulse, 84; both of good character.

5.58 p. m.—Incision increased to 14½ cm. Abdominal cavity carefully explored and all bleeding points tied off.

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6.05 p. m.—Respiration, 36. Intestines examined; omentum ligated and divided, after which perforation in posterior wall of stomach was readily found. It was about 1½ cm. in diameter. The wound was carefully sutured. Pulse, 88, and of good character.

6.20 p. m.—Pulse, 102; only fair in character; respiration, 39; 1.6 c. c. of brandy given hypodermically.

6.23 p. m.—Dr. Roswell Park, medical director Pan-American Exposition, arrived in the operating room.

6.31 p. m.—Abdominal cavity irrigated with sterile salt solution and abdominal opening sutured.

6.40 p. m.—Pulse, 120; fair; respiration, 36.

6.48 p. m.—Pulse, 124; tension good; respiration, 36.

6.50 p. m.—Abdominal sutures in place; 7 silk-worm gut sutures, with catgut between.

6.51 p. m.—Anesthetic stopped.

7.01 p. m.—Bandaging completed. Pulse, 122; respiration, 32.

7.17 p. m.—Hypodermic of morphine, 0.004 gram administered.

7.32 p. m.—Removed from the hospital to the ambulance, Drs. Park and Wasdin accompanying the President. At this time his condition was good, but he was still under the influence of the anesthetic.

8.20 p. m.—Arrived at the Milburn house and put to bed in fair condition. Pulse, 127; temperature, 100.6; respiration, 30. The nurses on duty were Miss K. R. Simmons and Miss A. D. Barnes, from the Emergency Hospital.

8.25 p. m.—Morphine sulphate, gm. 0.016, administered hypodermically.

8.30 p. m.—Pulse improved in character; slight nausea.

The first bulletin issued by the President's physicians, dated at 7 p. m., was as follows:

The President was shot about 4 o'clock; one bullet struck him on the upper portion of the breast bone, glancing and not penetrating; the second bullet penetrated the abdomen 5 inches below the left nipple and 1½ inches to the left of the median line. The abdomen was opened through the line of the bullet wound. It was found that the bullet had penetrated the stomach. The opening in the front wall of the stomach was carefully closed with silk sutures; after which a search was made for a hole in the back wall of the stomach. This was found, and also closed in the same way. The further course of the bullet could not be discovered, although careful search was made. The abdominal wound was closed without drainage. No injury to the intestines or other abdominal organ was discovered.

The patient stood the operation well. Pulse of good quality, rate of 130. Condition at the conclusion of the operation was gratifying. The result can not be foretold. His condition at present justifies hope of recovery.

8.43 p. m.—Pulse, 132. Rested quietly for eight minutes.

9.15 p. m.—Vomited a small amount of partly digested food and a small clot of blood. No fecal odor.

9.40 p. m.—Vomited small amount of undigested food.

10.25 p. m.—Pulse, 128; temperature, 100.4; respiration, 24.

10.40 p. m.—The following bulletin was issued:

The President is rallying satisfactorily, and is resting comfortably. Temperature, 100.4 degrees; pulse, 124; respiration, 24.

10.45 p. m.—Slight discoloration of dressings and occasional twinge of pain.

11 p. m.—Pulse, 122; temperature, 101; respiration, 24.

11.10 p. m.—Voided urine, 90 c. c.

12 midnight.—Pulse, 128; temperature, 101; respiration, 24. Slept quietly 20 minutes. Saline enema retained.

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SECOND DAY—SEPTEMBER 7, 1901.

12.40 a. m.—Passed urine, 60 c. c.

1 a. m.—The following bulletin was issued:

The President is free from pain and resting well. Temperature, 100.2; pulse, 120; respiration, 24.

2 a. m.—Pulse, 126. Passed urine, 30 c. c.

3 a. m.—Pulse, 110; temperature, 101.6; respiration, 24. The President continued to rest well.

3.20 a. m.—Passed 15 c. c. urine.

4.10 a. m.—Pulse, 100. Sleeping.

4.55 a. m.—Pulse, 108; temperature, 101.8; respiration, 24. Large amount of gas expelled.

5.05 a. m.—Pulse, 104. Pain severe on deep inspiration.

5.20 a. m.—Saline enema, 1 pint; retained. Restless.

6 a. m.—The following bulletin was issued:

The President has passed a good night. Temperature, 102; pulse, 110; respiration, 24.

6.15 a. m.—Morph. sulph., gm. 0.016, administered hypodermically.

6.50 a. m.—Pulse, 125. Passed urine, 60 c. c.

8 a. m.—Pulse, 123; temperature, 102.2; respiration, 24.

The nurses, Miss Simmons and Miss Barnes, returned to the Emergency Hospital, having been relieved by Miss Maud Mohun and Miss Jane Connolly.

9 a. m.—The following bulletin was issued:

The President passed a fairly comfortable night, and no serious symptoms have developed. Pulse, 146; temperature, 102; respiration, 24.

Acting Steward P. A. Eliot and Privates Jack Hodgins and Ernest Vollmeyer, all of the Hospital Corps, United States Army, have been detailed as orderlies.

12 noon.—Pulse, 136; temperature, 102.2; respiration, 28. Hypodermic of morph. sulph. gm. 0.01 administered.

1.15 p. m.—Saline enema, 500 c. c.

3.30 p. m.—Pulse, 140; temperature, 102.2; respiration, 24.

4.30 p.m.—Pulse, 127. Hypodermic digitalis. Passing much gas by the mouth.

5.30 p. m.—Pulse, 124. Passed urine, 60 c. c. Sponged with alcohol. Sleeping. Passed gas by mouth.

6.30 p. m.—Complains of intense pain in pit of stomach. Gave morp., 0.008 gm., hypodermically. No pain, but restless. Sponged with alcohol, and rested quietly for half an hour. The following bulletin was issued:

There is no change for the worse since last bulletin. Pulse, 130; temperature, 102.6 degrees; respiration, 29.

7.35 p. m.—Pulse, 133. Saline enema, 500 c. c., retained.

7.40 p. m.—Hypodermic digitalis. Passed urine, 45 c. c.

8.50 p. m.—Pulse, 132; temperature, 102.5; respiration, 28.

9.30 p. m.—The following bulletin was issued:

Conditions continue much the same. The President responds well to medication. Pulse, 132; temperature, 102.5; respiration, 25. All temperatures reported are taken in the rectum.

10.30 p. m.—Has slept quietly for 15 minutes. Saline enema, 500 c. c., with 4 gm. somatose. Rejected 60 c. c.

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10.40 p. m.—Gave hypodermic digitalis.

10.55 p. m.—Pulse, 140. Very restless. Gave morph., 0.008 gm., hypodermically.

11.15 p. m.—Passed from the bowels 240 c. c. greenish-colored fluid and two particles of fecal substance. Passed gas by the mouth.

FIRST URINALYSIS.

Quantity	30 c. c.
Color	dark amber.
Reaction	strongly acid.
Urea	0.028 gm. per 1 c. c. of urine.
Albumin	a trace.
Phosphates and chlorides	normal.
Sugar	none.
Indican	very small amount.

MICROSCOPICAL EXAMINATION.

The sediment obtained by centrifuge shows a large amount of large and small epithelial cells, with some leucocytes and occasional red cells. There is a comparatively large number of hyaline casts principally small, with some finely granular ones; also an occasional fibrinous one. The amount of sediment is large for the quantity of urine submitted. There were no crystals in the sediment.

THIRD DAY—SEPTEMBER 8, 1901.

12.30 a. m.—Pulse, 138; temperature, 102.6; respiration, 28. Restless during sleep. Limbs sponged with alcohol. Voided urine, 60 c. c. Quiet, and slept from 2 to 3 o'clock.

3.20 a. m.—The following bulletin was issued:

The President has passed a fairly good night. Pulse, 122; temperature, 102.4 degrees; respiration, 24.

3.30 a. m.—Saline enema, 500 c. c. Somatose, 4 gm.

4 to 4.30 a. m.—Confused and very restless.

5 a. m.—Pulse, 120; temperature, 102.2; respiration, 26. Complains of feeling chilly, but it passed in a moment.

5.35 a. m.—Voided urine, 45 c. c. Restless and talkative from 5 to 6 o'clock.

5.50 a. m.—Expelled a small quantity of brown fluid and gas by rectum.

6 a. m.—Expelled small quantity of brown fluid. Gas by mouth. Sleeping.

6.55 a. m.—Hypodermic digitalis. Passed gas by mouth.

7.45 a. m.—Pulse, 132; temperature, 102.8; respiration, 24. Hypodermic of strychnine, 0.001 gm.

8.20 a. m.—Wound dressed. Urine voided, 90 c. c.

9 a. m.—The following bulletin was issued:

The President passed a good night and his condition this morning is quite encouraging. His mind is clear and he is resting well. Wound dressed at 8.30 and found in a very satisfactory condition. There is no indication of peritonitis. Pulse, 132; temperature, 102.8; respiration, 24.

9.30 a. m.—Sleeping.

10.15 a. m.—Pulse, 132. Hypodermic digitalis.

10.25 a. m.—High enema; epsom salts, glycerine, and water.

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10.40 a. m.—Small dark-brown fluid stool with gas.
11 a. m.—Voided urine, 90 c. c.
12 noon.—The following bulletin was issued:

The improvement in the President's condition has continued since last bulletin. Pulse, 128; temperature, 101; respiration, 27.

Hypodermic strychnine. Small dark-brown fluid stool.
12.30 p. m.—Saline enema with somatose; not retained. Alcohol rub. Sleeping. Dr. Charles McBurney, of New York, joined the surgeons.
3 p. m.—Voided urine, 90 c. c. Pulse, 130; temperature, 101; respiration, 30.
4 p. m.—The following bulletin was issued:

The President, since the last bulletin, has slept quietly—four hours altogether—since 9 o'clock. His condition is satisfactory to all the physicians present. Pulse, 128; temperature, 101; respiration, 28.

Hypodermic strychnine. Sleeping.
4.45 p. m.—Restless and talkative. Water, 4 c. c., by mouth; first taken by mouth.
4.55 p. m.—Water, 4 c. c., by mouth. Enema of sweet oil, soap, and water. Passed some gas and 270 c. c. slightly colored fluid with a few particles of fecal substance and a very little mucus.
5.10 p. m.—Water, 4 c. c. Sponged with alcohol. Mouth washed with peroxide solution.
5.35 p. m.—Water, 8 c. c. Gas passed by mouth.
5.50 p. m.—Gas and water discharged by rectum.
6.10 p. m.—Water, 8 c. c.
6.20 p. m.—Water, 8 c. c. Nutritive enema of egg, whisky, and water; partly rejected.
7.15 p. m.—Hypodermic digitalis.
7.30 p. m.—Hypodermic strychnine.
7.40 p.m.—Pulse, 130; temperature 101.6; respiration, 28.
8 p. m.—Water discharged from the bowels. Very restless.
8.20 p. m.—Passed a great deal of gas and some fluid with particles of fecal substance.
9 p. m.—The following bulletin was issued:

The President is resting comfortably and there is no special change since last bulletin. Pulse, 130; temperature, 101.6; respiration, 30.

Restless. Voided urine, 45 c. c.
9.45 p. m.—Gas by rectum. Quiet only a few minutes at a time.
10 p. m.—Pulse, 128; respiration, 28.

SECOND URINALYSIS.

Quantity	450 c. c.
Color	amber—slightly turbid.
Reaction	strongly acid.
Specific gravity	1.026.
Urea	0.038 gm. per 1 c. c. of urine.
Albumin	mere trace.
Sugar	none.
Indican	abundant.
Sulphates	increased.
Phosphates	somewhat increased.
Chlorides	somewhat increased.

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MICROSCOPICAL EXAMINATION.

Microscopical examination of sediment obtained by centrifuge shows fewer organic elements. Some large and small epithelial cells and some leucocytes. Casts are not so abundant as yesterday and are *principally* of the small finely granular variety. There is a marked diminution in small renal epithelial cells.

Quite a quantity of large crystals of uric acid and bacteria are present.

FOURTH DAY—SEPTEMBER 9, 1901.

12.01 a. m.—Pulse, 124; temperature, 101.4; respiration, 28. Gas by mouth. Sleeping.

1.25 a. m.—Water, 8 c. c. Restless from 1 to 1.30 o'clock.

2 a. m.—Quiet and sleeping. Gas by mouth and by rectum.

2.20 a. m.—Took water, 12 c. c. Voided urine, 120 c. c.

3.15 a. m.—Very restless and mind much disturbed. Codeia phos. 0.015 gm. hypodermically.

3.20 a. m.—Nutritive enema. Sponged legs and arms with alcohol.

4.10 a. m.—Quiet and resting. Pulse, 120; temperature, 101; respiration, 28.

5.15 a. m.—Water, 12 c. c. Expelled small quantity of fluid, fæcal odor, with particles of fæcal substances and gas.

6 a. m.—The following bulletin was issued:

The President passed a somewhat restless night, sleeping fairly well. General condition unchanged. Pulse, 120; temperature, 101 degrees; respiration, 28.

Slept at intervals from 5 to 6 o'clock. Water, 12 c. c.

7.09 a. m.—Water, 15 c. c. Gas by rectum. Voided urine, 150 c. c. Mind clear. Feels chilly. Water, 24 c. c.

8 a. m.—Water, 24 c. c.

9 a. m.—Pulse, 112; temperature, 100.8; respiration, 28. Restless from 8 to 9 o'clock. Passing gas by mouth and rectum.

9.20 a. m.—The following bulletin was issued:

The President's condition is becoming more and more satisfactory. Untoward incidents are less likely to occur. Pulse, 112; temperature, 100.8 degrees; respiration, 28.

The following memorandum was issued to the nurses:

Nurses' hours.

Miss Mohun.....8 a. m. to 4 p. m.
Miss Connolly.....4 p. m. to midnight.
Miss McKenzie.....12 midnight to 8 a. m.

The nurse going off duty must not leave the sick quarters until she has satisfied her relief that all dressings are prepared and the relief understands the instructions of the physicians. The instructions will be in writing. Nurses on tour duty must not leave the sick room without proper relief (some one of the staff at the bedside of the patient), and then only for five minutes, unless relieved by a trained nurse.

Miss Hunt will be in the house and will be the relief for meals and also the special nursing of Mrs. McKinley.

Dr. Rixey will write out the instructions of the physicians and be accessible at all times. Any change demanded must be reported to him at once.

9.35 a. m.—Water, 30 c. c.

10 a. m.—Calomel, 0.015 gm., dry on the tongue. Nutritive enema of egg, whisky, and water.

11 a. m.—High enema, olive oil and castor oil.

11.15 a. m.—Calomel, 0.015 gm., dry on the tongue. Water, 30 c. c. More quiet.

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12 noon.—High enema, 2,000 c. c. soap and water with 8 c. c. ox gall. This was followed by a large, light brown, partly formed stool with gas.

12.15 p. m.—Calomel, 0.015 gm. Water, 60 c. c. Voided 240 c. c. urine. Sleeping.

1.15 p. m.—Calomel, 0.015 gm., dry on the tongue. Alcohol rub. Sleeping.

2.15 p. m.—Calomel, 0.015 gm. Water, 24 c. c. Sleeping.

3 p. m.—The following bulletin was issued:

The President's condition steadily improves and he is comfortable, without pain or unfavorable symptoms. Bowel and kidney functions normally performed. Pulse, 113; temperature, 101; respiration, 26.

Wound dressed.

3.20 p. m.—Calomel, 0.015 gm. Dry on the tongue.

4.20 p. m.—Spit up 15 c. c. greenish bitter fluid.

4.30 p. m.—Voided urine, 120 c. c. Nutritive enema given; part rejected.

5.50 p. m.—Hot water, 16 c. c.

6.15 p. m.—Pulse, 112. Considerable gas by mouth, and feels nauseated.

7.10 p. m.—Hot water, 16 c. c. Slept 15 and 20 minutes.

8 p. m.—Slept 20 minutes. Pulse, 112; temperature, 101; respiration, 27.

9.30 p. m.—The following bulletin was issued:

The President's condition continues favorable. Pulse, 112; temperature, 101; respiration, 27.

Voided urine, 180 c. c. Gave codeia, 0.015 gm.

10 p. m.—Nutritive enema. Complains of feeling full and very uncomfortable.

11.30 p. m.—Hot water, 16 c. c.

THIRD URINALYSIS.

Quantity received	540 c. c.
Color	amber—slightly turbid.
Specific gravity	1.026.
Albumin	a trace.
Indican	not so abundant as yesterday.
Urea	0.047 gm. per 1 c. c. of urine.
Chlorides and phosphates	about normal.
Sulphates	still somewhat high.
Sugar	none.

MICROSCOPICAL EXAMINATION.

Microscopical examination of sediment obtained by centrifuge shows a decrease in the amount of organic elements and an increase of amorphous urates, but fewer crystals of uric acid. Casts are fewer and only the small granular and large hyaline varieties. The proportion of large casts is greater. There are very few epithelial cells, mostly of renal type. A large number of cylindroids are found.

FIFTH DAY—SEPTEMBER 10, 1901.

12.05 a. m.—High enema of soap and water. Expelled part of the enema with light-brown stained fluid with dissolved fecal substances. Slept quietly for 25 minutes.

1.46 a. m.—Uncomfortable; turning frequently.

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1.50 a. m.—Very quiet and slept 35 minutes.

2.30 a. m.—Pulse, 108; temperature, 100.4; respiration, 26. Voided urine, 180 c. c. Gave hot water, 24 c. c.

3 to 4 a. m.—Sleeping. Hot water, 30 c. c.

4.10 to 5.05 a. m.—Sleeping.

5.20 a. m.—The following bulletin was issued:

The President has passed the most comfortable night since the attempt on his life. Pulse, 118; temperature, 100.4; respiration, 28.

Has passed much gas by mouth and rectum.

6 a. m.—Wakened and feels very comfortable. Water, 60 c. c.

7.05 a. m.—Nutritive enema. Alcohol rub. All previous temperatures by rectum; all following by mouth unless otherwise noted.

8.40 a. m.—Pulse, 109; temperature, 99.8; respiration, 25.

9 a. m.—The following bulletin was issued:

The President's condition this morning is eminently satisfactory to his physicians. If no complications arise a rapid convalescence may be expected. Pulse, 104; temperature, 99.8; respiration, 26. The temperature is taken by mouth and should be read about 1 degree higher by rectum.

9.20 a. m.—Water, 60 c. c. Voided urine, 60 c. c. Sleeping.

10.45 a. m.—Nutritive enema; expelled a portion.

11.40 a. m.—Pulse, 112; temperature, 100.3; respiration, 26. Water, 60 c. c. Complains of some distress in abdomen.

12 noon.—Expelled a quantity of light yellow fluid, fecal odor.

12.30 p. m.—Hypodermic codeia phos., 0.015 gm. Resting more quietly; sleeping. Voided urine, 150 c. c.

2 p. m.—Lime juice for the mouth. Water, 30 c. c. Oozing visible on bandage.

2.45 p. m.—Pulse, 120; temperature, 100; respiration, 28. Gas by mouth.

3.20 p. m.—The following bulletin was issued:

There is no change since this morning's favorable bulletin. Pulse, 110; temperature, 100; respiration, 28.

3.35 p. m.—Wound dressed. Water, 24 c. c. Voided urine, 150 c. c. Sleeping.

4.15 p. m.—Resting. Alcohol rub. Sleeping. Water, 90 c. c.

6.10 p. m.—Nutritive enema. Slept half an hour and expelled 180 c c. light yellow fluid, fecal odor, with gas.

9.20 p. m.—Pulse, 114; temperature, 100.6; respiration, 28. Some of the stitches removed from the abdominal wound and dressing done by Dr. Mann. Much exhausted, tired and very restless.

10.30 p. m.—The following bulletin was issued:

The condition of the President is unchanged in all important particulars. His temperature is 100.6; pulse, 114; respiration, 28.

When the operation was done on Friday last it was noted that the bullet had carried with it a short distance beneath the skin a fragment of the President's coat. This foreign material was of course removed, but a slight irritation of the tissues was produced, the evidence of which has appeared only to-night. It has been necessary on account of this slight disturbance to remove a few stitches and partially open the skin wound. This incident can not give rise to other complications, but it is communicated to the public as the surgeons in attendance wish to make their bulletins entirely frank. In consequence of this separation of the edges of the surface wound, healing of the same will be somewhat delayed. The President is now well enough to begin to take nourishment by the mouth in the form of pure beef juice.

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SIXTH DAY—SEPTEMBER 11, 1901.

12.05 a. m.—Beef juice, 4 c. c. First food taken into the stomach since the operation. Tasted good.

1.15 a. m.—Beef juice, 4 c. c. Water, 90 c. c. Urine voided, 240 c. c.

2 a. m.—Starch and laudanum enema followed by nutritive enema. Alcohol rub.

3 a. m.—Wound dressed by Dr. Rixey. Expelled from rectum 90 c. c. light yellow fluid, fecal odor.

4.50 a. m.—Has slept about 40 minutes. Beef, juice, 4 c. c. Water, 90 c. c.

5.15 a. m.—Gas by rectum. Feels chilly. Voided urine, 150 c. c.

6 a. m.—The following bulletin was issued:

The President has passed a very comfortable night. Pulse, 120; temperature, 100.2; respiration, 26.

Beef juice, 6 c. c. Sleeping.

7 a. m.—Beef juice, 8 c. c., taken with a relish.

8 a. m.—Beef juice, 8 c. c. Resting comfortably since 12 o'clock. Sleeping more than usual.

8.30 a. m.—Pulse, 116; temperature, 100.2; respiration, 28. Voided urine, 180 c. c. Took beef juice, 12 c. c.

9 a. m.—The following bulletin was issued:

The President rested comfortably during the night. Decided benefit has followed the dressing of the wound made last night. His stomach tolerates the beef juice well, and it is taken with great satisfactfon. His condition this morning is excellent. Pulse, 116; temperature, 100.2.

10.10 a. m.—Wound dressed. Remaining stitches removed. Starch enema followed by nutritive enema. Beef juice by mouth, 12 c. c.

11 a. m.—Water, 120 c. c. Expelled small amount light yellow fluid, fecal odor. Sleeping.

12 noon.—Sleeping.

12.40 p. m.—Beef juice, 16 c. c. High enema soap and water.

12.50 p. m.—Hypodermic strychnine. Restless.

1.15 p. m.—Albumin water, 16 c. c. Alcohol rub. Slept quietly for 1 hour.

2.15 p. m.—Pulse, 120; temperature, 100.2; respiration, 26. Complains of headache.

2.30 p. m.—Beef juice, 16 c. c. Voided urine, 240 c. c.

3 p. m.—Camphor applied to head. Albumin water, 16 c. c.

3.30 p. m.—Wound dressed by Dr. McBurney. The following bulletin was issued:

The President continues to gain and the wound is becoming more healthy. The nourishment taken into the stomach is being gradually increased. Pulse, 120; temperature, 100.2.

4 p. m.—Beef juice, 16 c. c.

4.50 p. m.—Water, 180 c. c. Voided urine, 120 c. c.

5 p. m.—Starch and laudanum enema.

5.20 p. m.—Nutritive enema of egg, whisky, and water. Sleeping.

6.15 p. m.—Albumin water, 16 c. c.

7.30 p. m.—Slept three-quarters of an hour. Complains of bandage being too tight.

7.35 p.m.—Beef juice, 16 c. c. Pulse, 120; temperature, 100.4; respiration, 30.

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8 p. m.—Lower strap loosened by Dr. Rixey. Sleeping.

8.45 p. m.—Albumin water, 16 c. c. Rubbed with alcohol. Complains of bandage being uncomfortably tight and it is loosened by Dr. Rixey. Blood count by Dr. Wasdin shows absence of blood poisoning.

9.40 p. m.—Beef juice, 16 c. c. Wound dressed by Dr. McBurney.

10 p. m.—The following bulletin was issued:

The President's condition continues favorable. Blood count corroborates clinical evidence of absence of blood poisoning. He is able to take more nourishment and relishes it. Pulse, 120; temperature, 100.4.

10.40 p. m.—Beef juice, 16 c. c. Changed to fresh bed.

11 p. m.—Starch and laudanum enema.

11.20 p. m.—Nutritive enema of whisky, egg, and water.

11.40 p. m.—Beef juice, 30 c. c. Strychnine hypodermically, 0.002 gm. Pulse, 126; temperature, 100.4; respiration, 32. Sleeping.

12 midnight.—Beef juice, 30 c. c. Voided urine, 240 c. c.

FOURTH URINALYSIS.

Quantity	82 c. c.
Color	amber—clear.
Specific gravity	1.027.
Reaction	strongly acid.
Albumin	a trace.
Indican	abundant.
Urea	0.04 gm. per 1 c. c. of urine.
E. phosphates and chlorides	normal.
Sulphates	still a little high.

MICROSCOPICAL EXAMINATION.

Microscopical examination of sediment obtained by centrifuge shows a marked diminution in amount of organic elements, but a great increase in uric-acid crystals.
There are very few epithelial cells—mostly of renal type.
There are fewer casts—small and large hyaline—some finely granular.
Cylindroids are more abundant.

SEVENTH DAY, SEPTEMBER 12, 1901.

1 a. m.—Beef juice, 30 c. c. Very restless. Alcohol rub.

1.45 a. m.—Has been sleeping. Water, 90 c. c. Complains of pain in the abdomen.

2 a. m.—Beef juice, 30 c. c. Whisky, 8 c. c. Water, 60 c. c.

3.10 a. m.—Chicken broth, 60 c. c. Water, 120 c. c.

4 a. m.—Beef juice, 30 c. c. Sleeping.

4.35 a. m.—Water, 16 c. c.

5 a. m.—Pulse, 122; whisky and water; chicken broth. Voided urine, 270 c. c.

6 a. m.—Beef juice, 30 c. c. Upper part of body quite moist from 5.30 to 6 o'clock. Sleeping.

6.20 a. m.—The following bulletin was issued:

The President has had a comfortable night. Pulse, 122; temperature, 100.2.

7 a. m.—Whisky and water. Sleeping.

7.35 a. m.—Hypodermic strychnine.

8 a. m.—Voided urine, 150 c. c. Whisky and water. Comfortable night; sleeping more than usual.

8.30 a. m.—Chicken broth, piece of toast, and small cup of coffee.

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9.15 a. m.—Wound dressed and doing well. Washed with iodine solution and peroxide.

9.20 a. m.—Castor oil, 30 c. c.

9.30 a. m.—The following bulletin was issued:

The President has spent a quiet and restful night and has taken much nourishment. He feels better this morning than at any time. He has taken a little solid food and relished it. Pulse, 120; temperature, 100.2 degrees.

10 a. m.—Pulse, 122; temperature, 100.2; respiration, 29. Whisky and water.

1.30 a. m.—Beef juice, 45 c. c. Slept at intervals. Bathed head and hands with camphor. Passing much gas by rectum and mouth.

11.30 a. m.—Pulse, 124. Infusion of digitalis, 8 c. c. Restless and depressed. Alcohol rub and sponge.

12.05 p. m.—Hypodermic strychnine, 0.002 gm.

Dr. McBurney returned home.

12.30 p. m.—Whisky and water. Chicken broth. Sleeping.

1.15 p. m.—Voided urine, 240 c. c.

1.30 p. m.—Small piece of toast and one soft-boiled egg. Did not relish it, and ate very little. Quieter and more cheerful since having last strychnine.

2 p. m.—Pulse, 128; temperature, 100.2; respiration, 28. Water, 90 c. c. Infusion of digitalis, 8 c. c. Skin moist and cold.

2.30 p. m.—Complains of headache and nausea. Whisky and water. Beef juice, 45 c. c. Drowsy; feels very tired.

3.05 p. m.—Pulse, 134; temperature, rectum, 101; respiration, 32. Hypodermic strychnine, 0.003 gm. Dr. Stockton called in consultation.

3 p. m.—The following bulletin was issued:

The President's condition is very much the same as this morning. His only complaint is of fatigue. He continues to take a sufficient amount of food. Pulse, 126; temperature, 100.2.

3.30 p. m.—Infusion digitalis, 15 c. c. Hypodermic codeia phos. 0.015 gm. Water, 150 c. c. Whisky and water. Beef juice, 30 c. c. Resting and sleeping at intervals.

4.45 p. m.—Pulse, 128; respiration, 28. Mind wandering and restless.

5 p. m.—Infusion digitalis, 15 c. c. Chicken broth, 90 c. c. Skin moist and cold.

6 p. m.—Pulse, 130; respiration, 31. Sleeps at intervals. Complains of feeling very tired and headache.

6.30 p. m.—Voided urine, 210 c. c. Whisky and water. Sleeping.

7 p. m.—Hypodermic strychnine, 0.003 gm. Calomel, 0.18 gm. dry on tongue.

7.30 p. m.—Whisky and water. Quiet and sleeping at intervals.

8 p. m.—Pulse, 130; temperature, rectum, 101; respiration, 28. Wound dressed by Dr. Mann.

8.30 p. m.—Resting very quietly. Upper part of body quite moist; cold. The following bulletin was issued:

The President's condition this evening is not quite so favorable. His food has not agreed with him and has been stopped. Excretion has not yet been properly established. The kidneys are acting well. His pulse is not satisfactory but has improved in the last two hours. The wound is doing well. He is resting quietly. Temperature, 100.2; pulse, 128.

9.30 p. m.—Castor oil, 30 c. c.

9.35 p. m.—High enema, soap and water and ox gall. Water, 120 c. c. A large, dark, semifluid stool. Urine voided, 180 c. c.

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10 p. m.—Whisky and water. Hypodermic strychnine, 0.002 gm.

10.30 p. m.—Seems much exhausted after the enema. Whole body moist and cold. Pulse weak and thready. Slept quietly 20 minutes.

11 p. m.—Whisky and water. Normal salt solution, 420 c. c., subcutaneously.

12 midnight.—Whisky and water. Infusion digitalis. Oxygen inhaled. The following bulletin was issued:

All unfavorable symytoms in the President's condition have improved since the last bulletin. Pulse, 120; temperature, 100.2.

FIFTH URINALYSIS.

Quantity	132 c. c.
Color	light amber, very turbid.
Specific gravity	1.025.
Reaction	acid.
Albumin	mere trace, if any.
Indican	less.
Urea	0.044 gm. per 1 c. c. of urine.
Sulphates	about normal.
E. phosphates	much increased.
Chlorides	normal.

MICROSCOPICAL EXAMINATION.

Microscopical examination of sediment obtained by centrifuge shows fewer organic elements than the last examination. There is less uric acid and a large amount of amorphous phosphates. Renal casts, about as in the last examination, with very few cylindroids.

EIGHTH DAY—SEPTEMBER 13, 1901.

12.20 a. m.—Voided urine, 240 c. c. Restless and complains of headache. Pulse fairly good.

1 a. m.—Pulse, 132. Whisky and water. Perspiring; body warmer. Very restless and wants to get up; tired.

1.45 a. m.—Hypodermic strychnine, 0.002 gm.

2 a. m.—Whisky and water, camphorated oil hypodermically.

2.15 a. m.—Clam broth, 45 c. c.

2.45 a. m.—Hypodermic camphorated oil.

2.50 a. m.—The following bulletin was issued:

The President's condition is very serious, and gives rise to the gravest apprehension. His bowels have moved well, but his heart does not respond properly to stimulation. He is conscious. The skin is warm and the pulse small, regular, easily compressible, and 126; respiration, 30; temperature, 100.

3 a. m.—Hypodermic of camphorated oil. Whisky and water. Clam broth.

3.30 a. m.—Quiet. Pulse, 124, volume fair; respiration, 32. Water, 16 c.c. Hypodermic camphorated oil. Condition of skin better. Sleeping.

4 a. m.—Whisky and water. Essential oil of camphor hypodermically.

4.30 a. m.—Chicken broth, 60 c. c.

5 a. m.—Whisky and water.

5.20 a. m.—Pulse, 122, volume not good. Infusion digitalis, 15 c. c. Whisky and water. Mind clear. Sleeps for 5 to 10 minutes at a time.

5.55 a. m.—Hypodermic strychnine, 0.003 gm. Skin slightly better.

6.30 a. m.—Liquid peptonoids; whisky and water.

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7 a. m.—Coffee, 45 c. c. Clam broth, 60 c. c.
7.40 a. m.—Pulse, 128; temperature, 100.8; respiration, 32.
8 a. m.—Whisky and water. Passed urine, 270 c. c.
8.30 a. m.—Hypodermic of adrenalin. Chicken broth.
8.45 a. m.—Hypodermic camphorated oil.
9 a. m.—Wound dressed with balsam of Peru. Whisky and water. Liquid peptonoid, 15 c. c. The following bulletin was issued:

The President's condition has somewhat improved during the past few hours. There is a better response to stimulation. He is conscious and free from pain. Pulse, 128; temperature, 99.8.

SIXTH URINALYSIS.

Color	amber—turbid, with phosphates.
Quantity	252 c.c.
Reaction	acid.
Specific gravity	1.023.
Albumin	mere trace, if any.
Urea	0.047 gm. per 1 c.c. urine.
Indican	a trace.
E. phosphates	increased.
Chlorides	normal.
Sulphates	a little high.

MICROSCOPICAL EXAMINATION.

Microscopical examination of sediment obtained by centrifuge before and after clearing shows no change from yesterday's sample. Casts, hyaline and granular, both large and small, comparatively few. Cylindroids, a few. Crystals, large amount of uric acid, some sodium urate, and in the untreated specimen a large amount of amorphous deposit, principally of phosphates. There are a few epithelial cells, small, granular. Occasional red cells and leucocytes. Spermatozoa.

9.40 a. m.—Hypodermic of strychnine, 0.002 gm. Hypodermic adrenalin, 1.4 c.c.
10 a. m.—Salt solution subcutaneously. Whisky and water.
10.20 a. m.—Clam broth, 60 c.c.; refused one-half.
11 a. m.—Whisky and water.
12 noon.—Whisky and water. Sleeping at intervals; slept 15 minutes.
12.30 p. m.—Chicken broth, 60 c.c.; took only half of it. The following bulletin was issued:

The President's physicians report that his condition is practically unchanged since the 9 o'clock bulletin. He is sleeping quietly.

1 p. m.—Whisky and water. Called for bedpan, but bowels did not move. Quiet and sleeping.
1.45 p. m.—Pulse, 123, not good; temperature, 100.4; respiration, 26. Liquid peptonoids, 15 c. c. A little difficulty for the first time in swallowing. Hypodermic strychnine, 0.002 gm. Hypodermic brandy, 2 c. c.
2 p. m.—Whisky and water.
2.15 p. m.—Clam broth, 30 c. c.; refused more. Wound dressed and doing well.
2.30 p. m.—Voided urine, 240 c. c. The following bulletin was issued:

The President has more than held his own since morning, and his condition justifies the expectation of further improvement. Pulse, 123; temperature, 99.4.

Hypodermic of brandy, whisky, and water. Liquid peptonoids.

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3.30 p. m.—Hypodermic brandy. Pulse very weak. Hypodermic camphorated oil.

4 p. m.—Whisky and water. The following bulletin was issued:

The President's physicians report that he is only slightly improved since the last bulletin. The pulse and temperature remain the same as at that hour.

4.30 p. m.—Hypodermic of brandy. Chicken broth, 60 c. c.
4.36 p. m.—Hypodermic essential oil camphorated.
4.40 p. m.—Hypodermic strychnine, 0.002 gm.
4.55 p. m.—Adrenalin hypodermically. Brandy and water.
5 p. m.—Oxygen. Urinated involuntarily.
5.15 p. m.—The following bulletin was issued:

The President's physicians report that his condition is grave at this hour. He is suffering from extreme prostration. Oxygen is being given. He responds to stimulation but poorly. Pulse, 125; respiration, 40.

6 p. m.—Oxygen continued. Normal salt solution subcutaneously. Whisky and water. Hypodermic nitroglycerin; hypodermic brandy.

6.15 p. m.—The following bulletin was issued:

The President's physicians report that his condition is most serious in spite of vigorous stimulation. The depression continues and is profound. Unless it can be relieved the end is only a question of time.

6.25 p. m.—No response to stimulants. Very restless. Hypodermic morphia, 0.015 gm., and atropine, 0.00045 gm.

7.40 p. m.—Oxygen continued; almost pulseless. Morphia hypodermically, 0.015 gm.

9 p. m.—Heart sounds very feeble. Oxygen continued. Slight reflex movements, and at 2.15 a. m., September 14, 1901, the President died.

In addition to those already mentioned, there were present in the operating room, emergency hospital, at the time of the operation:

Mr. Simpson, medical student, who was at the instrument tray.
Dr. Charles G. Stockton, of Buffalo.
Dr. P. W. Van Paymen, of Buffalo.
Dr. Joseph Fowler, of Buffalo.
Dr. D. W. Harrington.
Dr. W. D. Storer, of Chicago.

Dr. Nelson W. Wilson, sanitary officer of the exposition and in charge of the hospital until the medical director's arrival. Dr. Wilson made the report of the operation to the medical director.

P. M. RIXEY,
Medical Inspector, United States Navy.

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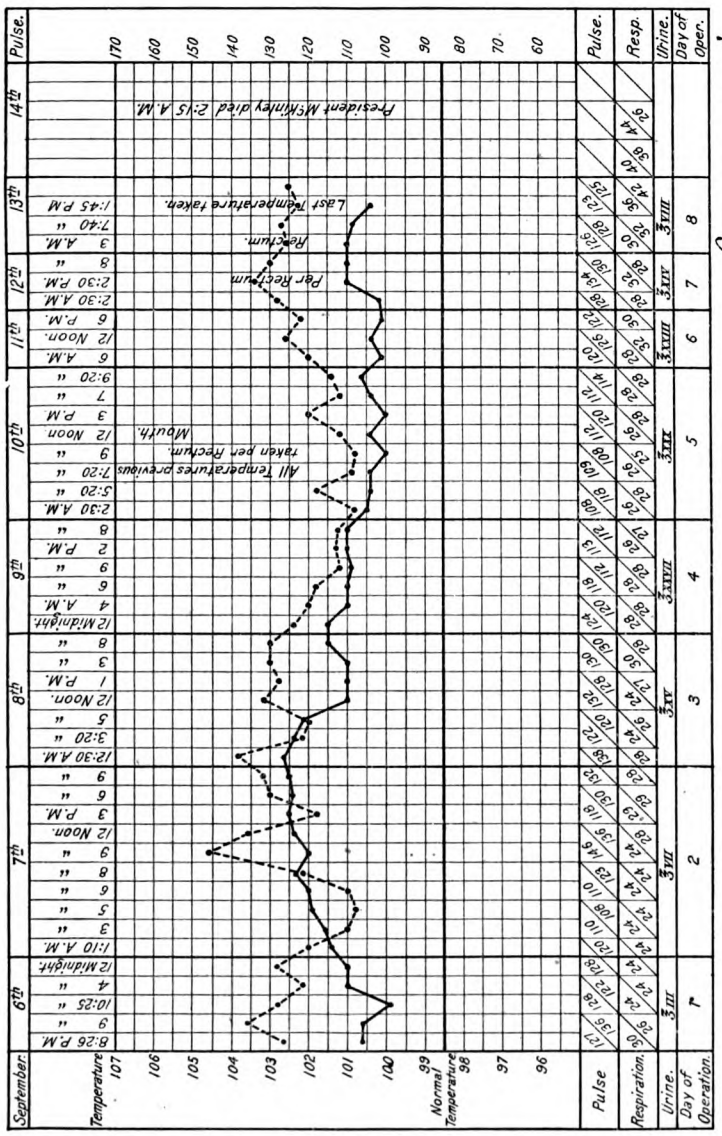
Five p. m. September 14, 1901, the following bulletin was issued:

The bullet which struck over the breastbone did not pass through the skin, and did little harm. The other bullet passed through both walls of the stomach near its lower border. Both holes were found to be perfectly closed by the stitches, but the tissue around each hole had become gangrenous. After passing through the stomach



the bullet passed into the back walls of the abdomen, hitting and tearing the upper end of the kidney. This portion of the bullet track was also gangrenous, the gangrene involving the pancreas. The bullet has not yet been found. There was no sign of peritonitis or disease of other organs. The heart walls were very thin. There was no evidence of any attempt at repair on the part of nature, and death resulted from the gangrene, which affected the stomach around the bullet wounds as well as the tissues around the further course of the bullet. Death was unavoidable by any surgical or medical treatment and was the direct result of the bullet wound.

cavity. The weight of the left kidney is 5 oz. 1 gr. The kidney is readily stripped from its capsule; is dark red; the stellate veins are prominent; and along its greater curvature are numerous dark red depressions. On the superior aspect of the kidney is a protrusion of the cortex, dark-red in color, and in this protrusion is a laceration 2 cm. in length, extending across the superior border approximately at right angles to the periphery of the kidney and from before backward. On incising the kidney, the cortex and medulla are not easily distinguishable from one another; both are of rose-red color, the cortex measuring approximately 6 mm. in thickness. The vessels in the pyramids of Farriem are very prominent. Beneath the protruding portion of the surface the cortex is dark red in color. This discoloration extends downward in pyramidal form into the medulla. The laceration of the surface marks the apex of the protrusion of the kidney substance. Between the spleen and the superior aspect of the kidney is a necrotic tract which extends down and backward and ends in a blind p: cket. The tract, which includes the superior aspect of the kidney, can be traced into the perinephritic fat to a point just above the surface of the muscles of the back. The necrotic cavity, which connects the wound on the posterior wall of the stomach and the opening adjacent to the kidney capsule, is walled off by the mesocolon and is found to involve a considerable area of the pancreas. A careful examination of the tract leading down toward the dorsal muscles fails to reveal the presence of any foreign body. After passing into the fat the direct character of the tract ceases and its direction can be traced no farther. The adjoining fat and the muscles of the back were carefully palpated and incised without disclosing a wound or the presence of a foreign body. The diaphragm was carefully dissected away and the posterior portion of the thoracic wall likewise carefully examined. All fat and organs which were removed, including the intestines, were likewise examined and palpated without result.

The great amount of fat in the abdominal cavity and surrounding the kidney rendered the search extremely difficult.

The liver is dark red in appearance, the gall bladder distended. The organ was not removed.

The right kidney is embedded in a dense mass of fat; capsule strips freely; it weighs 5 ounces; measures 11½ cm.; substance is soft; cortex is 6 mm. in thickness. There are a few depressions of the surface, and the stellate veins are prominent.

The pancreas at its center forms part of the necrotic cavity. Through its body are found numerous minute hemorrhages and areas of gray softening, the size of a pea and smaller. These are less frequent in the head portion of the pancreas.

The cause of death having been established and the autopsy having lasted nearly four hours, it was discontinued, as a further search for the bullet could serve no useful purpose.

There is no evidence of organic disease in any organ examined.

In regard to the chemical and bacteriological report, I have just received, under date of September 24, from Dr. Metzinger, the following:

There was no bacterial or chemical source of poison found on either cartridge or weapon.

From the outer wound there was obtained a gas bacillus with the ordinary pyogenic organism, but *no streptococcus*.

The chemical examination of the necrotic cavity showed that the material was alkaline and no free hydrochloric acid; microscopically showed only tissue material that was disorganized and unrecognizable.

The rest of the work as it relates to the autopsy is still in an incomplete condition, and there is little prospect of arriving at any definite results within the very near future.

In Dr. Matzinger's report submitted later he says the clinical examination of the empty shells and cartridges were negative, and closes his report with the following paragraph:

The absence of known pathogenic bacteria, particularly in the necrotic cavity, warrants the conclusion that bacterial infection was not a factor in the production of the conditions found at the autopsy.

A copy of Dr. Gaylord's report, received by me on October 16, gives the following anatomical diagnosis:

Gunshot wound of both walls of the stomach and the superior aspect of the left kidney; extensive necrosis of the substance of the pancreas; necrosis of the gastric

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wall in the neighborhood of both wounds; fatty degeneration, infiltration, and brown atrophy of the heart muscle; slight cloudy swelling of the epithelium of the kidneys.

The piece of retro-peritoneal fat, where it forms part of the necrotic cavity, is seen on section to be covered with a thick gray deposit, which has an average thickness of from 4 to 6 mm. Beneath this, and separating it from the fat, is a well-defined area of hemorrhage from 1 to 2 mm. in thickness. The appearance of this piece of tissue is characteristic of the fat tissue surrounding the entire cavity. A section, made perpendicular to the surface and stained with hæmatoxylin-eosin, shows the following characteristics: Under low power, there is no evidence of round-celled infiltration between the fat cells or of fat necroses. The surface of the tissue which, in the microscopic specimen was covered by a layer of grayish material, proves, under low power, to consist of a partly organized fibrinous deposit. At the base of this deposit is evidence of an extensive hemorrhage, marked by deposits of pigment. The surface of the membrane is of rough and irregular appearance and contains a large number of round cells with deeply stained nuclei. Under high power the organization of the membrane may be traced from the base toward the surface. The portion immediately adjacent to the fat tissue consists of a network of fibrin inclosing large numbers of partly preserved red blood corpuscles. In many areas the red blood corpuscles are broken down and extensive deposits of pigment are found. Extending into the fibrin structure of the membrane are numerous typical fibroblasts and round cells. In some regions pigment is evidently deposited in the bodies of large branching and spindle cells. Here and there included in the membrane are the remains of fat cells, and toward the surface of the membrane a large number of round cells, scattered through the interstices of the membrane. There are but few polymorph nuclear leucocytes. Here and there in the membrane are fragments of isolated fibrous connective tissue, with irregular contours and an appearance suggesting that they are fragments of tissue which have been displaced by violence and included in the fibrin deposit. The fibrin in the superficial layers of the membrane is formed in hyaline clumps. The organization along the base of the deposit is comparatively uniform.

Sections stained with methylene blue, carbo-thionin, and Gram's method, were carefully examined for the presence of bacteria, with negative results. Even upon the surface of the membrane there are no evidences of bacteria.

The section of the left kidney, including the triangular area of hemorrhage described in the macroscopic specimen, reveals the following appearances: (Section hardened in formalin with hæmatoxylin-eosin.) Examined macroscopically section represents a portion of kidney cortex made perpendicular to the surface of the cortex and including an area of hemorrhage into the substance of the cortex 1 cm. in length, measured from the capsular surface downward, and presenting a width of from 5 to 6 mm. The capsular surface has evidently been torn.

Under low power the margins of the preparations are found to consist of well-preserved kidney structure. There is a slight amount of thickening of the interstitial tissue and occasional groups of tubules are affected by beginning cloudy swelling. The glomeruli are large and present a perfectly normal appearance. As we approach toward the center of the preparation occasional glomeruli are met with in which capillary loops are engorged, and the adjacent tubules contain red corpuscles. A short distance farther the kidney structure becomes entirely necrotic. Here and there the remains of tubules may be made out, and these are infiltrated with cells. The necrotic area presents a rough, net-like structure. As we approach toward the surface of the kidney we find that the necrosis becomes more marked. There is the merest suggestion of kidney structure, its place being taken by disintegrated red blood cells and leucocytes embedded in a well-defined fibrinous network. There is great distortion of the kidney structure about the periphery of the necrotic area. In this region a considerable amount of pigment is also found in the necrotic tissues.

Under high power the characteristics of the necrotic tissues may be better observed. The kidney structure is broken up and torn into irregular fragments, infiltrated by red blood corpuscles and leucocytes. In the portion of the necrotic mass beneath the capsule the kidney structure is practically obliterated and is replaced by a network of fibrin which includes large numbers of red blood cells and leucocytes. Scattered through the entire necrotic area are frequent deposits of pigment. In the deeper portions of the necrotic area the margins of the fibrin deposit are invaded by fibroblasts from the connective tissue structure of the kidney. The organizations in these areas is, however, slight.

Sections stained with methylene blue and Gram's method and carefully examined under oil immersion fail to reveal the presence of any organisms. In preparations stained with methylene blue the deposits of pigment may be readily observed. Section of the same tissue hardened in Hermann's solution and examined for fat shows

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the presence of numerous fat droplets within the epithelium of the tubules which are adjacent to the area of necrosis. In the portions of the preparation more widely distant from the area of necrosis no fat is present.

Section of the right kidney, hardened in formalin and stained with hæmatoxylin-eosin, reveals the presence of areas in which slight parenchymatous degeneration of the epithelium in the uriniferous tubules may be noted. These areas are not extensive, and are confined to single groups of tubules. The interstitial connective tissue of the organ seems to be slightly increased in amount, but there is no well-defined round-celled infiltration. An occasional hyaline glomerulus is to be met with in these cases, surrounded by increased connective tissue. The epithelium of the kidney tubules, aside from those in which the parenchymatous degeneration is present, is well preserved. The nuclei are well stained, protoplasm finely granular.

A fragment of the stomach wall taken from the immediate neighborhood of the anterior wound, is in a condition of complete necrosis. The nuclei of the cells are scarcely demonstrable. The epithelial surface is recognized with difficulty. At its base are apparently a few round cells. Examination of the blood vessels reveals nothing characteristic. There is apparently no evidence of thrombosis. A section made through the gastric wall at some distance from the wound reveals the well-preserved muscular structure of the gastric wall, which presents no characteristic alterations. Superficial portions of the epithelium have apparently been affected by post-mortem digestion. However, in one portion of the preparation the epithelium is intact and shows distinct evidence of marked round-celled infiltration between the granular structures. The blood vessels contain red blood corpuscles with the usual number of leucocytes.

The fragments of heart muscle which were removed from the right and left ventricular walls were examined in the fresh state and exhibited a well-defined fatty degeneration of the muscle fibers, and in the case of the right ventricular wall an extensive infiltration between the muscle fibers of fat was apparent. Sections from these fragments of muscle hardened in Hermann's solution are taken for examination. A fragment of muscle from the right ventricular wall was removed at a point where the fat penetrated deeply into the muscular structure, the ventricular wall at this point showing an average thickness of 2½ millimeters. Under low power the muscle fibers are separated into bundles by masses and rows of deeply stained fat cells. The muscle fibers are seen to contain groups of dark-brown granules lying in the long axes of the cells. Under high power these are resolved into extensive groups of dark-brown pigment arranged around the nuclei. The muscle fibers are slender; the cross and longitudinal striation is well defined. Examined near the margin of the preparation, where the osmic acid fixation has been successful, all of the muscle fibers are found to contain minute black spherical bodies extending diffusely through all the muscle fibers about the entire margin of the preparation. These fine fat droplets are present in sufficient amount to speak of an extensive diffuse fatty degeneration of the muscle fibers. Where the large fat cells have separated the muscle fibers, these are found to be more atrophic than those in the central portions of the larger bundles.

The examination of the section through the healed bullet wound on the chest wall reveals nothing of importance. The dissolution of continuity is filled in by granulation tissue, and there is evidence of beginning restoration of the epithelium from the margins. Stains for bacteria give negative results.

In summing up the macroscopic and microscopic findings of the autopsy, the following may be stated: The original injuries to the stomach wall had been repaired by suture, and this repair seems to have been effective. The stitches were in place and the openings in the stomach wall effectually closed. Firm adhesions were formed both upon the anterior and posterior walls of the stomach, which reenforced these sutures. The necroses surrounding the wounds in the stomach do not seem to be the result of any well-defined cause. It is highly probable that they were practically terminal in their nature and that the condition developed as a result of lowered vitality. In this connection there is no evidence to indicate that the removal of the omentum from the greater curvature and the close proximity of both of these wounds to this point had any effect in bringing about the necrosis of the gastric wall, although circulatory disturbances may have been a factor. The fact that the necrotic tissue had not been affected by digestion strongly indicates that the necrosis was developed but shortly before death. The excavation in the fat behind the stomach must be largely attributed to the action of the missile. This may have been the result of unusual rotation of a nearly spent ball or the result of simple concussion from the ball passing into a mass of soft tissues. Such effects are not unknown. The fact that the ball grazed the superior aspect of the left kidney, as shown by the macroscopic investigation of that organ, indicates the direction of the missile, which passed in a line from the inferior border of the stomach to the tract in the fat imme-

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liately superior to the kidney. There was no evidence that the left adrenal gland vas injured.

The injury to the pancreas must be attributed to indirect rather than direct action f the missile. The fact that the wall of the cavity is lined by fibrin, well advanced organization, indicates that the injury to the tissues was produced at the time of ie shooting. The absence of bacteria from the tissues indicates that the wound was ot infected at the time of the shooting and that the closure of the posterior gastric ound was effectual. The necrosis of the pancreas seems to us of great importance. he fact that there was no fat necroses in the neighborhood of this organ indicates iat there was no leakage of pancreatic fluid into the surrounding tissues. It is pos-ble that there was a leakage of pancreatic fluid into the cavity behind the stomach, the contents of this cavity consisted of a thick, grayish fluid containing fragments connective tissue. In this case the wall of fibrin would have been sufficient to revent the pancreatic fluid from coming into contact with the adjacent fat. The tensive necrosis of the pancreas would seem to be an important factor in the cause death, although it has never been definitely shown how much destruction of this gan is necessary to produce death. There are experiments upon animals upon cord in which the animals seem to have died as a result of not very extensive sions of this organ. One experiment of this nature, reported by Flexnor, Journal Experimental Medicine, Volume II, is of interest. The fact that concussions and ght injuries of the pancreas may be a factor in the development of necrosis is dicated by the researches of Chiari, Zeitschrift für Heilkunde, Volume XVII, 1896, d Prager medicinische Wochenschrift, 1900, No. 14, who has observed (although a mparatively rare condition) extensive areas of softening and necrosis of the pan-eas, especially of the posterior central portion, which lies directly over the bodies the vertebræ, where the organ is most exposed to pressure or the effects of con-ssion. The wound in the kidney is of slight importance except as indicating the rection taken by the missile. The changes in the heart, as shown by the macro-opic inspection and the microscopic examination, indicate that the condition of this gan was an important factor. The extensive brown atrophy and diffuse fatty generation of the muscle, but especially the extent to which the pericardial fat d invaded the atrophic muscle fibers of the right ventricular wall, sufficiently plain the rapid pulse and lack of response of this organ to stimulation during life.

The cause of death of the President has been made plain by the itopsy. It was due primarily to a gunshot wound by a .32-caliber ullet fired at close range, devitalizing the tissues immediately sur-ounding its tract, so that gangrene of those parts injured, involving e stomach, pancreas, kidney, and other tissues, followed. The toxic oducts from these devitalized tissues were absorbed, and with the generated condition of the muscular tissue of the heart caused death, ie final symptoms being those of exhaustion.

REPORT OF DEATH.

Name of deceased: McKinley, William.
Office: President of the United States.
Date of death: September 14, 1901.
Time of death: 2.15 a. m.
Place of death: 1168 Delaware avenue, Buffalo, N. Y.
Date of burial: September 19, 1901.
Place of burial: Canton, Ohio.
Cause of death: Gangrene of both walls of stomach and pancreas following gunshot ound.

I hereby certify that McKinley, William, President of the United States, died hile at Buffalo, N. Y., as set forth in the record of his case, as follows:

The President was holding a public reception at the Academy of Music, Pan-merican Exposition, Buffalo, N. Y., on September 6, 1901, and whilst shaking ands with the people was shot at 4.07 p. m. through the stomach by Leon F. Czol-osz.

There is good evidence that the disease (or injury) causing death was in line of uty, the facts being as follows: The President was shot by an assassin whilst receiv-ig the people.

P. M. Rixey,
Medical Inspector, United States Navy.

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I must mention here the giving up by Mr. John G. Milburn of his entire home in Buffalo and the devoting of his whole time and energy to the care of the President.

In concluding this report I must also refer to the untiring and devoted services of Mr. George B. Cortelyou, secretary to the President, who, with Mr. Nelson P. Webster, Mr. M. C. Latta, members of the Executive staff, and Mr. C. A. Conrad, of the Post-Office Department, were on duty night and day. Executive Mansion Steward William Sinclair and Messengers Charles Tharin, Thomas Lightfoot, and Harry Mickie were also on duty at the Milburn house during the President's illness.

In obedience to the Department's orders, I was with the President's party at Buffalo, N. Y., on September 6. Upon arrival at the railroad station on its return from Niagara Falls, about 3.30 p. m., the President directed me to escort Mrs. McKinley to the Milburn house.

As soon as I learned of the attempt on the President's life I hastened to his side at the emergency hospital on the Exposition grounds and was in the operating room with him at about 5.30 p. m. The President was under the influence of the anesthetic administered by Dr. Eugene Wasdin, of the United States Marine-Hospital Service. Dr. M. D. Mann, with a full corps of assistants, was ready to begin a laparotomy, which all deemed imperative.

Being satisfied with the completeness of the preparation and the ability of the operating surgeon, I made ready to assist and watched every step of the operation. The wounds having been closed, and the President's condition being good, I requested Dr. Roswell Park, the medical director of the Pan-American Exposition, to send nurses and a surgical bed to the Milburn house and to take personal charge of the removal of the President, as I had to inform Mrs. McKinley of her husband's condition and make ready a room for his reception.

On his arrival I assumed charge of the case, having as consultants Dr. M. D. Mann, of Buffalo, N. Y.; Dr. Roswell Park, of Buffalo, N. Y.; Dr. Herman Mynter, of Buffalo, N. Y.; Dr. Eugene Wasdin, of the United States Marine-Hospital Service. Dr. Charles McBurney, of New York, joined the consultations at 3 p. m. September 8, and left for home after the 9.30 a. m. bulletin of September 12. Dr. Charles G. Stockton, of Buffalo, N. Y., joined the consultations at 5 p. m. September 12. Dr. Edward G. Janeway, of New York, and Dr. W. W. Johnson, of Washington, D. C., arrived and Dr. McBurney returned after all hope had departed. All were present at the autopsy. Dr. H. G. Matzinger, of Buffalo, N. Y., made all the urinalyses and also had charge of the chemical and bacteriological work. The histological examination of the tissues was made by Dr. H. R. Gaylord, who, with Dr. Matzinger, performed the autopsy.

In addition to the nurses mentioned, Miss Grace McKenzie, of Baltimore, Md., was employed after her arrival, and Miss Evelyn Hunt, of San Francisco, Cal., Mrs. McKinley's nurse, assisted as required.

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